In the Claims:

1. (amended) A signal cancellation method comprising the steps of:

splitting an input signal into a first and a second signal;

splitting said second signal into mutually orthogonal first and second subsignals;

recombining said first and second subsignals after respective amplitudes thereof have been adjusted, forming a third signal;

canceling said first signal by the third signal thereby obtained.

2. (amended) A signal cancellation method comprising the steps of:

splitting an input signal into a first and a second signal;

splitting said second signal into first and second subsignals of same phase;

orthogonally recombining said first and second subsignals after respective amplitudes thereof have been adjusted, forming a third signal;

canceling said first signal by the third signal thereby obtained.

3. (amended) The signal cancellation method according to claim 1, wherein at least one of said first and second subsignals is split into third and fourth subsignals of mutually opposite phases, said fourth subsignal is delayed, and after the amplitude of said third subsignal has been adjusted, said third subsignal is recombined with said fourth subsignal after said delay.

4. (original) The signal cancellation method according to claim 1, wherein at least one of said first and second subsignals is split into third and fourth subsignals of the same phase, said fourth subsignal is delayed, and after the amplitude of said third subsignal has been adjusted, said third subsignal is recombined in antiphase with said fourth subsignal after said delay.

5. (amended) The signal cancellation method according to claim 1, wherein said second signal is split into mutually orthogonal first and second subsignals and a third subsignal having a freely selected phase in the opposite quadrant as said first and second subsignals and said third subsignal is delayed, and after the amplitudes of said first and second subsignals have been adjusted, said first and second subsignals are recombined in antiphase with said third subsignal after said delay.

6. (amended) A signal cancellation method comprising the steps of:

splitting an input signal into a first and a second signal;

splitting said second signal into mutually in-phase first, second and third subsignals;

recombining said first and second subsignals after respective amplitudes thereof have been adjusted, forming a third signal;

canceling said first signal by the third signal thereby obtained wherein said third subsignal is delayed, said first and second subsignals after amplitude adjustment are combined in mutually orthogonal phase and said third subsignal after said delay is combined in a freely selected phase in the quadrant opposite the first and second subsignals.

7. (original) The signal cancellation method according to claim 1, wherein a first adjustment process, whereby the amplitude of the first subsignal is adjusted and the amplitude of the output signal at this time is minimized or reduced, and a second adjustment process, whereby the amplitude of the second subsignal is adjusted and the amplitude of the output signal at this time is minimized or reduced, are alternately performed in repetition.

8. (original) The signal cancellation method according to claim 2, wherein at least one of said first and second subsignals is split into third and fourth subsignals of mutually opposite phases, said fourth subsignal is delayed, and after the amplitude of said third subsignal has been adjusted, it is recombined with said fourth subsignal after said delay.

9. (original) The signal cancellation method according to claim 2, wherein at least one of said first and second subsignals is split into third and fourth subsignals of the same phase, said fourth subsignal is delayed, and after the amplitude of said third subsignal has been adjusted, said third subsignal is recombined in antiphase with said fourth subsignal after said delay.

10. (original) The signal cancellation method according to claim 2, wherein said second subsignals is split into mutually orthogonal first and second subsignals and a third subsignal having a freely selected phase in the opposite quadrant as said first and second subsignals, said third subsignal is delayed and after the amplitudes of said first and second subsignals have been adjusted, said first and second subsignals are recombined in antiphase with said third subsignal after said delay.

11. (original) The signal cancellation method according to claim 2, wherein said second signals is split into mutually in-phase first, second and third subsignals, said third subsignal is delayed, and first and second subsignals after amplitude adjustment are recombined in mutual orthogonal phase and said third subsignal after said delay is combined in a freely selected phase in the quadrant opposite the first and second subsignals.

12. (original) The signal cancellation method according to claim 2, wherein a first adjustment process, whereby the amplitude of the first subsignal is adjusted and the amplitude of the output signal at this time is minimized or reduced, and a second adjustment process, whereby the amplitude of the second subsignal is adjusted and the amplitude of the output signal at this time is minimized or reduced, are alternately performed in repetition.

13. (currently amended) A signal cancellation device, which adjusts the phase and amplitude components of one signal formed by the splitting of an input signal so as to be the antiphase of another signal formed of the split input signal, and cancels the input signal by recombining the split signals with the input signal, the signal cancellation device characterized as comprising:

an orthogonal splitter, which splits one of said split signals into first and second subsignals which are mutually orthogonal;

first and second amplitude adjusters, which are able to adjust the amplitudes of the first and second subsignals; and

an in-phase combiner, which combines in-phase said first and second subsignals which have undergone amplitude adjustment.

14. (currently amended) A signal cancellation device, which adjusts the phase and amplitude components of one signal formed by the splitting of an input signal so as to be the antiphase of another signal formed of the split input signal, and cancels the input signal by recombining the split signals with the input signal, the signal cancellation device characterized as comprising:

an in-phase splitter, which splits one of said split signals into first and second subsignals having the same phase;

first and second amplitude adjusters, which are able to adjust the amplitudes of the first and second subsignals; and

an orthogonal combiner, which orthogonally combines said first and second subsignals which have undergone amplitude adjustment.

15. (original) The signal cancellation device according to claim 13, wherein at least one of said first and second amplitude adjuster is able to reverse its output signal in positive phase or reverse phase.

16-17.(cancelled)

18. (currently amended) The signal cancellation device according to claim 13, wherein at least one of said first and second amplitude adjuster ~~are/is~~ is provided with:

an in-phase splitter, which splits the input ~~subsignals~~ subsignal into third and fourth subsignals of the same phase,

a delay device, which delays said fourth subsignal,

an amplitude adjuster, which is able to adjust the amplitude of said third subsignal in a single phase, and

an anti-phase combiner, which combines in opposite phases said third subsignal after amplitude adjustment, and said fourth subsignal after delay.

19. (currently amended) The signal cancellation device according to claim 18, wherein said ~~orthogonal~~ in-phase combiner, which ~~ortho~~gonally ~~-~~combines said first and second subsignals after amplitude adjustment, and said anti-phase combiner, which combines said third subsignal

after amplitude adjustment and said fourth subsignal after delay in opposite phases, are formed by a common multi-phase combiner.

20. (currently amended) The signal cancellation device according to claim 13, wherein at least one of said first and second amplitude adjuster comprises:

a splitter, which splits the ~~input~~ signals input to said at least one of said first and second amplitude adjuster into mutually orthogonal first and second subsignals and a third subsignal, which has a freely selected phase and is in the opposite quadrant of said first and second subsignals;

a delay device, which delays said third subsignal;

third and fourth amplitude adjusters, which are able to adjust the amplitudes of said first and second subsignals each in a single phase; and

an in-phase combiner, which combines in the same phase said first and second subsignals after amplitude adjustment and said third subsignal after delay.

21 (cancelled)

22. (original) The signal cancellation device according to claim 13, and further comprising an automatic controller, which alternately and repetitively performs a first adjustment process, whereby the amplitude of ~~the~~ an output signal of said signal cancellation device at this time is minimized or reduced by controlling a first amplitude adjuster, and a second adjustment process, whereby the amplitude of ~~the~~ an output signal of said signal cancellation device at this time is minimized or reduced by controlling a second amplitude adjuster, are alternately performed in repetition.

23. (original) The signal cancellation device according to claim 14, wherein at least one of said first and second amplitude adjuster is able to reverse its output signal in positive phase or reverse phase.

24. (original) The signal cancellation device according to claim 14, wherein at least one of said first and second amplitude adjuster comprises:

an anti-phase splitter, which splits input subsignals into third and fourth subsignals of opposite phases;

a delay device, which delays said fourth subsignal;

an amplitude adjuster, which is able to adjust the amplitude of said third subsignal in a single phase; and

an anti-phase combiner, which combines in opposite phases said third subsignal after amplitude adjustment and said fourth subsignal after delay.

25. (original) The signal cancellation device according to claim 14, wherein at least one of said first and second amplitude adjuster are/is provided with:

an in-phase splitter, which splits input subsignals into third and fourth subsignals of the same phase;

a delay device, which delays said fourth subsignal;

an amplitude adjuster, which is able to adjust the amplitude of said third subsignal in a single phase; and

an anti-phase combiner, which combines in opposite phases said third subsignal after amplitude adjustment and said fourth subsignal after delay.

26.(cancelled)

27. (currently amended) The signal cancellation device according to claim 14, wherein at least one of said first and second amplitude adjuster comprises:

a splitter, which splits ~~input~~ signals input to said at least one of said first and second amplitude adjuster into first, second and a third subsignals having the same phase;

a delay device, which delays said third subsignal;

third and fourth amplitude adjusters, which is able to adjust the amplitudes of said first and second subsignal each in a single phase; and

a combiner, which combines said first and second subsignal in the same phase after amplitude after adjustment and said third subsignal after delay in a freely selected phase in the opposite quadrant as said first and second subsignals.

28. (currently amended) The signal cancellation device according to claim 14, and further comprising an automatic controller, which alternately and repetitively performs a first adjustment process, whereby the amplitude of ~~the~~ an output signal of said signal cancellation device at this time is minimized or reduced by controlling a first amplitude adjuster, and a second adjustment process, whereby the amplitude of ~~the~~ an output signal of said signal cancellation device at this time is minimized or reduced by controlling a second amplitude adjuster, are alternately performed in repetition.

29. (original) A feed-forward amplifier comprising a signal cancellation device in one of a pre-stage distortion extraction loop and a post-stage distortion loop, said signal cancellation device including:

an orthogonal splitter, which splits ~~one of said signals~~ each input signal into first and second subsignals which are mutually orthogonal;

first and second amplitude adjusters, which are able to adjust the amplitudes of the first and second subsignals; and

an in-phase combiner, which combines in-phase said first and second subsignals which have undergone amplitude adjustment.

30. (currently amended) A feed-forward amplifier comprising a signal cancellation device in one of pre-stage distortion extraction loop and a post-stage distortion loop, said signal cancellation device including:

an in-phase splitter, which splits ~~one of said~~ each input signals into first and second subsignals having the same phase;

first and second amplitude adjusters, which are able to adjust the amplitudes of the first and second subsignals; and

an orthogonal combiner, which orthogonally combines said first and second subsignals which have undergone amplitude adjustment.

31. (currently amended) The feed-forward amplifier according to claim 29, and further comprising a next-stage splitter, which splits a portion of the output of the ~~pre-stage~~ said amplifier, and a pre-stage combiner, which synthesizes ~~said~~ split signals split by said orthogonal splitter and ~~the~~ delay signals of the pre-stage.

32. (currently amended) The feed-forward amplifier according to claim 30, and further comprising a next-stage splitter, which splits a portion of the output of the pre-stage amplifier, and a pre-stage combiner, which synthesizes ~~said~~ split signals and ~~the~~ delay signals of the pre-stage.